

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method placing nodes in a wireless local area network, the method comprising:
 - receiving user-specified parameters regarding the wireless local area network, including:
 - a layout of a space in which the wireless local area network is to be located, and
 - a maximum number of wireless access points, or a number of users and a minimum wireless data throughput for at least some of the wireless access points;
 - performing a first phase of an algorithm by automatically creating a collection of candidate solutions to an optimized layout of multiple wireless access points within the space layout, wherein the first phase includes performing a genetic algorithm and identifying a location of backhaul nodes for connecting the wireless local area network to an external wired network, and wherein the candidate solutions at least in part take into account the user-specified parameters;
 - performing at least a second phase of the algorithm by automatically adjusting the candidate solutions in the collection to obtain the optimized layout of the multiple wireless access points within the space layout, wherein the second phase includes performing the genetic algorithm and identifying locations of IEEE 802.11-type access points that are to be connected wirelessly, or via wires, to the backhaul nodes, and wherein the optimized layout at least in part takes into account the user-specified parameters;
 - performing at least a third phase of the genetic algorithm to identify locations of Bluetooth-type access points that are to be connected wirelessly, or via wires, to the backhaul nodes; and
 - displaying the optimized layout of the multiple wireless access points within the space layout.

2. (Original) The method of claim 1 wherein receiving user-specified parameters includes a requirement to employ two or more wireless local area network protocols, wherein the wireless local area network protocols include IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, or Bluetooth; and

wherein the space layout includes a number of floors, a ceiling height, and walls,
wherein the user-specified parameters include a type of wall construction;
and

wherein the user-specified parameters further include an antenna type and
whether the wireless local area network is to be connected via wires or
wirelessly to an external wired network.

3. (Original) The method of claim 1 wherein performing a first phase of the algorithm includes obtaining optimization parameters, wherein the optimization parameters include bandwidths of two or more wireless local area network protocols with associated receive sensitivities, and wherein the optimized layout includes a minimum number of wireless access points.

4. (Cancelled)

5. (Original) The method of claim 1 wherein at least one of the user-specified parameters has different weights during the first and second phases.

6. (Original) The method of claim 1 wherein the user-specified parameters include at least one user-specified location of a fixed or preferred wireless local area network access point.

7. (Original) The method of claim 1 wherein the user-specified parameters include a location of a power outlet or an Ethernet connection.

8. (Original) The method of claim 1 wherein displaying the optimized layout of access points includes displaying color-coded wireless coverage patterns

within the space layout, wherein the color-coding corresponds to bandwidth, signal strength or both.

9. (Original) The method of claim 1 wherein receiving user-specified parameters includes receiving user adjustments to model assumptions, wherein the model assumptions include antenna specifications, wall type attenuation, or wireless local area network protocol bit rate/transmit power.

10-45. (Cancelled)